

# PUBLIC AWARENESS & UNDERSTANDING ACTION PLAN

## Overview

The primary objective of this action plan is to promote an understanding of the unique natural and historical<sup>26</sup> resources of the Sanctuary. Since CINMS' designation as a sanctuary in 1980, the Education and Outreach Program has been the cornerstone of resource protection efforts. Through community and regional partnerships in education, CINMS has reached out to a broad spectrum of the public, exposing them to not only the biological, physical, and intrinsic value of the Sanctuary, but also the impacts human activity can have on this invaluable resource. Developing a personal sense of ownership and responsibility is the key to building stewardship. As stewards of the marine resources, the public can better identify opportunities for protection and enhancement of the Sanctuary through conservation-based efforts and activities.

## Description of the Issues

Section 301(b)(4) of the NMSA indicates one of the purposes of the National Marine Sanctuary Program is to enhance public awareness, understanding, appreciation, and wise and sustainable use of the marine environment, and the natural, historical, cultural, and archeological resources of the National Marine Sanctuary System (16 U.S.C. 1431(b)(4)). Enhancing these characteristics in the public is highly challenging and never-ending given the continuous stream of new information about the Sanctuary, and population dynamics of the southern California coastal region. New information about the Sanctuary results from improved understanding of known resources as well as new discoveries of natural and maritime heritage resources, varying conditions of the Sanctuary ecosystems, and the adaptive management scheme applied to Sanctuary resources by CINMS and its partner regulatory agencies. In addition to perpetually sharing new information with the public, education and outreach staff are tasked with reaching increasing numbers of people from many different cultural backgrounds.

### Improving Awareness and Understanding

Through the course of management plan review the public, Sanctuary Advisory Council members, and Sanctuary staff have recognized several specific issues related to public awareness and understanding. Input from the public came in the form of comments from 1999 public scoping meetings.<sup>27</sup> One of the issues emerging from the public scoping process was a lack of public understanding about the Sanctuary, its resources, purpose, location, rules and programs. Many community members felt addressing the lack of awareness and basic knowledge about the Sanctuary is something CINMS should make a priority in the revised management plan. CINMS staff, in conjunction with the Sanctuary Advisory Council (Advisory Council), also acknowledged the fact that education and outreach are an integral part of Sanctuary management and are mandated by the NMSA. Other general scoping comments included:

- The Sanctuary should continue to inform the public about the Sanctuary, its boundaries, resources and authorities;

<sup>26</sup> "Historical" is used to include cultural and archeological resources. See 15 CFR 922.3.

<sup>27</sup> Since several public scoping meetings were held in San Luis Obispo, Los Angeles and Washington D.C. (communities beyond the Sanctuary's major outreach efforts in Santa Barbara and Ventura counties), many comments from those regions reflect less familiarity with the Sanctuary. Furthermore, public scoping comments do not reflect Sanctuary outreach efforts made since 1999.

- The Sanctuary should support efforts to improve marine education in the public school system;
- The Sanctuary should emphasize connections between watersheds and ocean systems in education programs and products;
- The Sanctuary should identify and target specific user groups on the resource impacts of their activities;
- CINMS education and outreach should be expanded outside of Santa Barbara;
- The Sanctuary should provide more public education opportunities;
- The Sanctuary should continue to foster a stewardship ethic;
- To improve safety, the Sanctuary should improve and expand its public service tools, such as weather reporting capabilities; and
- The Sanctuary should do more to reach non-English speaking communities.

Since the 1999 public scoping period, the Sanctuary has been thrust into the spotlight by two projects that have received much national attention: 1) the Channel Islands MPA network designation and implementation process, and 2) *JASON XIV - "From Shore To Sea."*<sup>28</sup> The Channel Islands marine protected area (MPA) network process, which began in 1999, has drawn the attention of academic institutions, policy makers, fishermen, resource managers and conservationists worldwide. MPA network education and outreach programs engaging this diverse array of constituents has been an important and

unique Sanctuary contribution to the process. From 2001 to 2003, the Sanctuary was a major partner in *JASON XIV: From Shore To Sea*. This project generated extensive regional, national and international interest in the Channel Islands with 8,000 local and over one million national and international students participating in the live broadcasts and online digital labs. The Sanctuary contributed to *JASON XIV* by developing storyline themes and by providing data, content resources and staff support. Through these projects and other efforts described in this action plan Sanctuary education and



**Figure 27.** *JASON XIV broadcasts about the Channel Islands, such as this one led by Dr. Bob Ballard, reached over one million students around the world. (Robert Schwemmer)*

outreach staff continue to strive for enhanced public awareness and understanding about CINMS and its unique natural and maritime heritage resources.

<sup>28</sup> The JASON Project is a multi-disciplinary education program founded in 1989 by Dr. Robert Ballard and administered by the Jason Foundation for Education. Each year JASON participants explore a different region of the earth using science, math, and technology. JASON XIV focused on the Channel Islands.

### Population Growth and Cultural Diversity

The challenge of enhancing awareness and understanding about the Sanctuary is exacerbated by population growth and cultural diversity along the southern California coast. CINMS is located adjacent to Los Angeles, one of the largest metropolitan areas in the United States. The latest U.S. Census estimates the population of the Los Angeles metropolitan area (composed of Los Angeles, Orange and Riverside counties) at approximately 16 million (U.S. Census Bureau 2000a), up 12.7% since 1990 (U.S. Census Bureau 1990). The same census estimates indicate the population of coastal counties bordering the Sanctuary (Santa Barbara and Ventura counties) is over 1.1 million, up 10% since 1990. These population growth rates present a challenge to reach ever-more members of the public with information about the Sanctuary. Furthermore, this growing population consists of numerous ethnic groups: white 60%, non-Latino white 47%, Latino 32%, Asian 11%, black 7%, American Indian 1%, and Pacific Islander 0.3%, (U.S. Census Bureau 2000a). Within these ethnic groups are people from numerous cultural backgrounds, with a variety of language traditions. For example, the Latino K-12 student enrollment was 57% of the total enrollment in Santa Barbara County schools in 2005 (California Department of Education 2007). Education and outreach staff must assess how best to reach these different cultural groups, which is an effort requiring cultural awareness and understanding and demands far more than translating Sanctuary information into multiple languages. Southern California's expanding population and complex cultural diversity challenge CINMS education and outreach staff to create meaningful connections with a vast and changing audience to increase awareness and understanding about the Sanctuary and its mandate to protect the fragile living and historical/cultural resources making this region unique.

## **Addressing the Issues – Strategies For This Action Plan**

Each of the national marine sanctuaries has its own unique marine environment. Thus, education, outreach and interpretive efforts are tailored to site-specific ecosystems, cultural resources, human activities and resource management issues. CINMS education and outreach efforts are focused in two strategic areas: 1) *community involvement, partnerships and community program development* through interactive programs (training programs, workshops, special events, and school programs) and 2) *product development* (printed materials, website development, audio visual materials, signs, displays and exhibits) as critical education and outreach tools.

The education strategies in this action plan were developed with regional input from marine educators, user groups and concerned citizens. When possible, these programs and products will be implemented with a bilingual component in an effort to communicate to southern California's non-English speaking population. In addition, all education programs and products, from classroom educational materials to teacher training workshops, strive to correlate with California and National Science Education standards. CINMS evaluates its educational programs and products and uses performance measures to assess their success (see Strategy EV.1).

While addressing site-specific education and outreach needs, the CINMS Education Program also strives to fulfill the NMSP's national education plan by: 1) providing educational leadership in marine conservation and protection efforts; 2) promoting the Sanctuaries' identity with site-specific application of projects and products; and 3) establishing a standard of educational excellence to be upheld by all thirteen national marine sanctuary sites.

As individual sites, each of the sanctuaries works to develop stewards on a local and regional basis. Collectively, the thirteen sanctuaries work together to foster a national and global marine conservation ethic. Education and outreach provide essential tools for successful marine resource management. CINMS will evaluate the effectiveness of its education and outreach programs in an effort to meet the

NMSP performance measure that states “By 2010 all education programs implemented in national marine sanctuaries will be assessed for effectiveness against stated program goals and objectives and National Science Education Standards.”

Volunteers are viewed as a valued Sanctuary resource and a key to success in the implementation of CINMS’ education and outreach programs.

There are nine strategies in the Public Awareness and Understanding (AU) action plan:

- AU.1 – Education Program Development;
- AU.2 – Community Involvement/Volunteer & Intern Program Development;
- AU.3 – Team OCEAN;
- AU.4 – Developing Outreach Technology;
- AU.5 – Greater Southern California Outreach;
- AU.6 – Developing Education & Outreach Tools & Products;
- AU.7 – Visitor Center Support & Development;
- AU.8 – MPA Network Education; and
- AU.9 – Multicultural Education

Each of these strategies is detailed below.



**Figure 28.** K-12 education is an important part of CINMS management. (Laura Francis)

## STRATEGY AU.1 – EDUCATION PROGRAM DEVELOPMENT

- Objective: To link local teachers with national efforts to improve ocean literacy.
- Implementation: Education and Outreach staff

### **Background**

The Sanctuary recognizes the value of working with educators in local school systems to provide educational materials throughout local and regional K–12 programs, train teachers and give students first hand exposure to the Sanctuary. CINMS links local teachers to national efforts to improve ocean literacy by providing opportunities for teachers to integrate ocean studies into all disciplines, participate in field investigations, interact with the research community, learn scientific monitoring techniques, develop lesson plans and refine presentation skills. CINMS education staff use best practices when developing educational programming and stay abreast of current issues and changes in science and environmental education content standards by participating in annual education conferences and workshops put on by leaders in science education (California Science Teachers Association, National Marine Educators Association, etc.).

### **Activities (7)**

**(1) Develop Teacher Workshops.** CINMS is working with community partners to conduct teacher-training workshops directed toward developing Sanctuary stewards. The purpose of these workshops is to provide teachers with materials and strategies for incorporating marine science, and specifically Sanctuary-related topics into their teaching practice. Workshops range from one day to one-week programs and longer workshops incorporate a field trip component to the Sanctuary. Most workshops target grade 6-12 teachers. Topics for workshops include: 1) Marine Science Technology including GIS; 2) Ocean-related concepts in physical, earth and biological sciences; 3) Field monitoring techniques for intertidal and offshore systems, and 4) historical resources. A CINMS “Teacher At Sea” Program was started in 2006 aboard the R/V Shearwater. Selected teachers work alongside researchers on seabird population studies and MPA network ROV monitoring, and other research projects in the Sanctuary. As part of their experience, teachers develop an online journal, a mini-unit of lessons, and present activities at regional or national conferences or submit articles for publication in professional education journals.

Status: This activity has been ongoing for several years and new workshops will be developed as necessary.

Partners: CREEC Network, Santa Barbara County Office of Education, Ventura County Superintendent of Schools Office, Los Angeles Unified School District, UC Santa Barbara Marine Science Institute, Center for Image Processing and Education, Gold Coast Science Network, Project Clean Water, other NGO’s, and resource agencies such as the Channel Islands National Park, West Coast National Marine Sanctuaries and Centers for Ocean Science Education Excellence (COSEE) West and California COSEE, NOAA Teacher at Sea Program

**(2) Continue to Develop Education Programs Addressing Water Quality.** Recognizing the critical role water quality plays in the health of Sanctuary resources, CINMS is working in partnership with local NGOs and agencies to develop a watershed education program taking a systems approach to understanding the types, range and extent of human use impacts on water quality and marine ecosystems. By establishing this link between the community and the Sanctuary, CINMS hopes to develop a more informed constituency to influence decision makers about system-wide water quality issues.



**Figure 29.** CINMS Education Coordinator Laura Francis conducts water sampling with teachers during a 2003 “Mapping an Ocean Sanctuary” GIS workshop. (CINMS)

The Coastal Watersheds Education Program includes the following components:

- 1) Web-based and classroom activities integrating and interpreting current research program data sets, such as *Plumes and Blooms* (a study of the impacts of storm runoff on the marine environment of the Santa Barbara Channel);
- 2) research and monitoring training programs for teachers onboard the Sanctuary research vessel to expand skills in developing field investigations;
- 3) involving students in local volunteer monitoring projects including water sampling and sandy beach

monitoring. Watershed education programs are linked to priority water quality issues and focus on educating the public about the causes and impacts of nonpoint source pollution to the marine environment. In 2006, the NOAA-funded California B-WET grant program was started in Santa Barbara and Ventura Counties. B-WET is a competitively based program that supports existing environmental education programs, fosters the growth of new programs, and encourages the development of partnerships among environmental education programs throughout the Santa Barbara and Ventura County watersheds. Funded projects provide Meaningful Watershed Experiences for students and Professional Development Opportunities for Teachers in the Area of Environmental Education. CINMS partners with schools and non-profits that are recipients of B-WET grants to ensure that Sanctuary messages are incorporated into these programs.

**Status:** This activity has been ongoing for several years and new education programs will be developed in conjunction with Strategy WQ.2.

**Partners:** South Coast Watershed Resource Center; Sea Center; CI Harbor Boating Instruction and Safety Center; Community Environmental Council; Surfrider Foundation; Heal the Ocean; Cabrillo High School Aquarium; UCSB Marine Science Institute; Santa Barbara Maritime Museum; Project Clean Water; County of Ventura and Channel Keeper, B-WET grant recipients

**(3) Provide Content for Geographic Information Systems (GIS) “Mapping An Ocean Sanctuary” Educational Materials.** *Mapping An Ocean Sanctuary* contains GIS educational materials specific to CINMS, designed for students in grades 6–12. CINMS provides the content and data sets for development of these materials, working in cooperation with other partners to complete the final product. Mapping An Ocean Sanctuary partners conduct regional and national workshops, held in Santa Barbara, Ventura, and Los Angeles counties.

A GIS-based teacher training program visually displays large databases so patterns and processes in the Sanctuary (a complex interface between natural and human activities) are revealed over time. GIS is an excellent tool to integrate across disciplines of science, geography and math, and to create a knowledge

base to better understand human use impacts on the marine environment. The purpose of the program is to provide: 1) GIS-based resources for teaching students about the role of the Sanctuary in resource protection; 2) opportunities for teachers and students to participate in field monitoring studies and data collection techniques contributing to the GIS database; and 3) “shared” information through GIS ARCIMS on the Internet. Mapping An Ocean Sanctuary allows teachers and students to collect and analyze data, spatialize the information using GIS, and begin to see trends over time between human interactions and impacts on the marine environment.

Modules within Mapping An Ocean Sanctuary include: Internet Resources, ArcView Skill Sheets, Exploring a Sanctuary, Environmental Stewardship, Invisible Boundaries, Protecting Our Seas and Environmental Monitoring. In 2003, CINMS worked with Florida Keys, Gray’s Reef and Stellwagen Bank national marine sanctuaries to develop a mini grant to expand this curriculum to the other sanctuary sites.

Status: Initiated in 2000; expanded in 2003; content upgrades in years 2 and 4

Partners: Center for Image Processing in Education; NGS; NSF; ESRI; UCSB; Ventura College, National Marine Sanctuaries

**(4) Continue support of UC Santa Barbara’s Marine Science Institute Oceans to Classrooms marine science series.** The Sanctuary is working collaboratively with researchers from the University of California at Santa Barbara (UCSB) on research and monitoring projects focusing on the Santa Barbara Channel. One component of the marine sciences series is the Floating Lab Program, which provides opportunities for students to participate in collaborative offshore research and monitoring conducted by UCSB’s Marine Science Institute and CINMS. Students gain exposure in the use of scientific information in natural resource protection. CINMS provides staff support for teacher workshops, content for the floating lab workbook, field itineraries, classroom teaching kits and pre/post trip curricula. CINMS will also provide the research platform for teacher workshops.

Status: Partnership with UCSB initiated in 2001; materials to be updated and staff support provided biannually or as requested by Floating Lab Program staff

Partners: UCSB researchers and area teachers

**(5) Conduct Student Field Monitoring.** CINMS is working with teachers and students to conduct intertidal and sandy beach monitoring programs and is part of a network of national marine sanctuaries (including Monterey Bay, Cordell Bank, Gulf of the Farallones, and Olympic Coast) coordinating teacher and student monitoring activities on the West Coast. The goals of the Long Term Monitoring Program and Experiential Training for Students (LiMPETS) program are to use field-based workshops and emerging technologies to engage teachers and students in marine monitoring efforts and to encourage collaboration and coordination among west coast sanctuaries. The network has established a web site, provides teacher training opportunities, and produces classroom and field toolkits. By engaging the K-12 community in marine monitoring, the network provides opportunities to explore local, state, and federal parks, reserves, refuges, and sanctuaries and foster stewardship for these important marine areas. By becoming involved in field-based science and monitoring efforts, teachers and students appreciate and understand nature’s complex inter-relationships and will support development of policies that lead to effective ecosystem management.

Status: Ongoing program since 2002, LiMPETS workshop held in 2002; program to continue across years 1-5

Partners: K-12 teachers from Santa Barbara, Carpinteria, Ventura, Oxnard, Lompoc and L.A. Unified School District High Schools, West Coast National Marine Sanctuaries, California Sea

Grant, University of California Santa Cruz, Farallones National Marine Sanctuary Foundation, COSEE West, University of California, Santa Barbara

**(6) Partner with the Mobile Marine Education Van.** In 2001, the Santa Barbara Museum of Natural History developed a Waves on Wheels (WOW) mobile van. The WOW program began as a partnership between the Channel Islands National Marine Sanctuary, Santa Barbara Museum of Natural History and County of Santa Barbara to develop a specially outfitted outreach van to take our dynamic marine education programs on the road to serve schools, libraries and community centers. The program began its tour in Santa Barbara County in 2002 and extended the reach to Ventura and Oxnard in 2004. The WOW program reached 6,000 teachers and students and the general public in the first year of operation. The WOW program supported the Sanctuary's mission of protecting marine life and habitats surrounding the Channel Islands and will help educate the public about the Sanctuary's goals, programs and current resource management issues. Program activities are linked to state and local science education standards and include hands-on activities focusing on topics such as: 1) species adaptations; 2) food webs; 3) ocean habitats; 4) predator-prey relationships and 5) endangered species. WOW uses dynamic instruction techniques to develop an understanding of the richness and complexity of life found in our local marine environment and teach the importance of ensuring continued preservation. In 2006, the University of California Marine Science Institute became a partner in the mobile education van through a Bay Watershed Education and Training (B-WET) grant. The program is now called the Mobile REEF and UCSB is currently outfitting the van with a chiller and live animal touch tank, and also with a mobile internally projected Magic Planet sphere that shows global data patterns.

Status: Program initiated in 2000; support to continue as needed through years 1-5

Partners: Santa Barbara Museum of Natural History, County of Santa Barbara, University of California Santa Barbara

**(7) Participate in National Initiative strategies including the JASON Project, Immersion Institute, Sanctuary Quest, and Telepresence (Oceanslive!).** The NMSP encourages each site to participate in national initiatives to foster a system-wide identity. CINMS will be hosting and coordinating a variety of national initiatives in the next 5 years as well as locally sponsored outreach events. CINMS will sponsor events linked to the JASON Project, Immersion Institute, Sanctuary Quest, and national telepresence initiative (see also AU.4, activity 3) to educate the local and national community about Sanctuary resources and research programs. Events may include ocean fairs/community days, live broadcasts from the Sanctuary via the Internet or to mainland viewing locations, teacher workshops and student argonaut programs.

Status: Ongoing since designation; to continue across years 1-5

Partners: The JASON Foundation for Education, NOS, National Park Service, and others

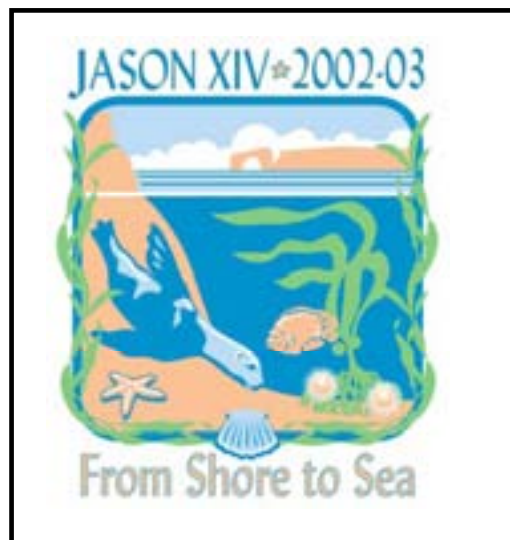


Figure 30. The JASON XIV logo

## STRATEGY AU.2 – COMMUNITY INVOLVEMENT/VOLUNTEER & INTERN PROGRAM DEVELOPMENT

- Objective: To increase community awareness about the Channel Islands National Marine Sanctuary and the National Marine Sanctuary Program through the development of CINMS volunteers and interns.
- Implementation: Education and Outreach staff

### ***Background***

The Sanctuary recognizes the value of reaching the public through adult education venues and is actively working with local and regional city and community colleges to provide opportunities to learn about Sanctuary resources in a formal, higher education setting. Critical to Sanctuary operations, volunteers and interns are important human resources the Sanctuary considers among its greatest assets. Volunteers and interns help the Sanctuary accomplish many of its objectives.

CINMS draws on all members of the community to participate as volunteers. Through volunteer programs, CINMS strives to increase community awareness about the National Marine Sanctuary Program and develop stewards of CINMS. Volunteers provide a mechanism for involving the community in Sanctuary activities such as research and monitoring, education and outreach programs, Sanctuary events and functions, and office/administration duties.

In 2006, Channel Islands Naturalist Corps volunteers alone provided over 16,000 hours of service. This service is approximately equivalent to the work of eight full time equivalent (FTE) employees. In addition, CINMS internships provide opportunities for students from local, national, and international colleges and universities an opportunity to gain valuable work experience in, explore career options in, and contribute to: marine resource protection, research and monitoring, policy and planning, and education and outreach. CINMS interns may earn college credit, move on to higher education, or find interesting and productive marine-resource related employment. Sponsoring interns enables CINMS to raise awareness about the Sanctuary among the local college community as well as foster careers in marine resource management.

Another essential volunteer element of CINMS is the Sanctuary Advisory Council. While approximately half of the members of this advisory body serve as government representatives and are therefore paid by their employers to participate, the majority of individuals serving as community representatives volunteer their time to do so. Activities pertaining to the CINMS Sanctuary Advisory Council are discussed in Strategy OP.1 of the Operations Action Plan.

### ***Activities (5)***

***(1) Provide Presentations at Regional and National Workshops and Conferences.*** To increase awareness among formal and informal educators about educational resources and programs available through NOAA, NMSP headquarters and CINMS, CINMS education staff present workshops and programs at a variety of regional and national conferences each year (such as the Southwest Marine Educators Association, California Science Teachers Association and National Marine Educators Association). Presence at these workshops and conferences also provides CINMS with an opportunity to demonstrate and distribute educational materials and products.

Status: Ongoing since designation; to continue annually

Partners: California Science Teachers Association, National Science Teachers Association, National Marine Educators Association and others

**(2) Continue Adult Education Programs and From Shore to Sea Lecture Series.** CINMS worked with Santa Barbara City College, Santa Barbara Maritime Museum, and Ventura College Community Services to offer adult education classes from 2001 - 2003. These evening classes covered the major program areas and resource issues of the CINMS. Classes usually had approximately 30 participants and include three, two-hour evening sessions. A field trip component with a boat trip to the Sanctuary was also included. This program provided adults with opportunities to learn about current resource management issues of the Channel Islands and Santa Barbara Channel. Class participants were encouraged to become volunteers for CINMS. During the JASON XIV From Shore to Sea Expedition to the Channel Islands in 2002-2003, these adult education classes evolved into a monthly "From Shore to Sea" lecture series that brings guest lecturers to Santa Barbara and Ventura to talk about research on the Channel Islands and surrounding waters. The From Shore to Sea Lecture Series was developed by CINMS and CINP. Since 2007, the Sanctuary has offered parts of this monthly lecture series as an adult education class with Santa Barbara City College.

Status: Ongoing since 2001; evolved into From Shore to Sea lecture series in 2003, From Shore to Sea Lectures occur in Santa Barbara and Ventura the second Tuesday and Wednesday of each month and are advertised through SBCC adult education

Partners: Santa Barbara City College, Ventura College Community Services, Santa Barbara Maritime Museum, Channel Islands National Park

**(3) Maintain Interagency Interpretive Program with Channel Islands National Park.** The National Park Service and the NMSP share a common goal of protecting sensitive marine ecosystems through the management of designated national parks and seashores and national marine sanctuaries. Channel Islands National Park (CINP) and CINMS created a strategic plan under the General Agreement between the NMSP and NPS to develop joint interpretive and educational projects and programs, including program planning, facilities design and operation, and on-site services to the public. The strategic plan addresses interpretive volunteer programs through inter-agency volunteer training, recruitment, and scheduling. This collaboration enables both agencies to more efficiently use local volunteers while providing a mechanism for both agencies to present a united front to the public. In 2005, CINMS and CINP created an additional Memorandum of Agreement (MOA-2004-188/1279) to create a full-time employee volunteer administrative support position to support interagency cooperation on volunteer and outreach programs.

Status: Initial development began in 2001; will continue to evolve over years 1-5

Partners: Channel Islands National Park

**(4) Maintain the Great Annual Fish Count Program.** The Great Annual Fish Count (GAFC) is made possible through a partnership between the NMSP and the Reef Environmental Education Foundation (REEF). Since its 1992 inception in CINP and CINMS, the GAFC now takes place every July in seven marine sanctuaries off the coasts of California, Florida, New England, Texas and Washington, as well as off the coasts of Georgia, Louisiana, North Carolina, Oregon and British Columbia (with outreach surveys in Belize). Volunteer scuba divers and snorkelers are trained throughout the year to collect data on fish species' diversity, abundance and distribution. The GAFC event takes place during the first week of July, although monitoring is carried out year-round. CINMS and REEF partner to conduct an annual four-day field survey with fish identification experts to fill in gaps in REEF and Sanctuary data sets. In 2006, a marine invertebrate component was added to the REEF program. Data are processed by REEF and used by many of the national marine sanctuaries as baseline data in which to measure changes over time.

Status: Initiated in 1992; to continue as an annual event

Partners: Channel Islands National Park, Reef Environmental Education Foundation, Paradise Dive Club

**(5) Maintain the CINMS Internship Program.** CINMS provides internships in marine resource protection, research and monitoring, policy and planning, and education and outreach on a year-round basis, as needed. Maintaining the CINMS internship program requires intern recruitment, placement, orientation, training, and supervision. In some instances internship stipends are arranged through Sanctuary partners such as the National Marine Sanctuary Foundation. Local, national, and international interns participate in the CINMS internship program. In 2006 and 2007, CINMS participated in the NOAA Ernest F. Hollings (Hollings) scholarship program. The program is designed to: (1) increase undergraduate training in oceanic and atmospheric science, research, technology, and education, and foster multidisciplinary training opportunities; (2) increase public understanding and support for stewardship of the ocean and atmosphere and improve environmental literacy; (3) recruit and prepare students for public service careers with the NOAA and other natural resource and science agencies at the federal, state and local levels of government; and (4) recruit and prepare students for careers as teachers and educators in oceanic and atmospheric science and improve scientific and environmental education in the United States. CINMS will continue to host Hollings Scholars each summer for 10-week internships. As part of the CINMS Multicultural Education Strategic Plan, Hispanic and under-represented youth are recruited for internships to become involved in CINMS programs (see strategy AU.9 activity 2).

Status: Formalized intern program initiated in 1998; to continue across years 1-5

Partners: UC Santa Barbara; Santa Barbara City College; California State University Channel Islands; Ventura and Oxnard Colleges; NOAA Hollings Scholarship Program; MERITO



*Figure 31. Channel Islands Naturalist Corps, 2001 (Becky Swift)*

## STRATEGY AU.3 – TEAM OCEAN

- Objective: To build on the success of Team OCEAN Programs at other national marine sanctuaries by fully achieving the network's three primary goals.
- Implementation: Education and Outreach staff

### ***Background***

A 1999 national survey estimated more than 120 million people participated in some form of coastal and marine wildlife viewing or nature-based recreation in the U.S. - over 60% of all residents 16 and older. The California coast offers some of the best opportunities in the world to view marine wildlife in a variety of habitats and California ranked second only to Florida in terms of overall number of participants engaged in marine recreation (18 million). Marine wildlife can be disturbed or injured when marine recreation activities are conducted inappropriately. Similarly, inappropriate conduct may also cause injury in the participants involved in such activities. Public awareness about proper marine recreation and marine wildlife viewing conduct is necessary. One mechanism for the Sanctuary to provide awareness and understanding about proper marine recreation and wildlife viewing conduct is Team OCEAN (Ocean Conservation Education Action Network). Team OCEAN has three primary goals: 1) provide public education through one-on-one interpretation and a variety of informative brochures; 2) promote stewardship by instilling a sense of personal understanding, ownership and responsibility for the Sanctuary among the general public; and 3) establish a Sanctuary presence on the water, emphasizing the importance of proper use of our resources, now and for future generations. The Team OCEAN program was established in the Florida Keys National Marine Sanctuary and has been adopted at several sanctuaries including CINMS. Building on the success of programs developed at other sites unifies volunteer and outreach program messages and training programs on a national level.

### ***Activities (4)***

***(1) Maintain the Channel Islands Naturalist Corps (CINC).*** The CINC program (part of the interagency interpretive program with Channel Islands National Park described in AU.2, activity 3) trains volunteers to educate the community about the culturally rich and biologically diverse resources found within the Sanctuary and Park. Over 100,000 tourists, school children, and local residents visit the Sanctuary annually on board whale watch vessels, marine floating classrooms, and natural history tours. CINC volunteers educate passengers, monitor Sanctuary resources, and collect data on board whale watch vessels departing out of Santa Barbara Harbor, Ventura Harbor, and Channel Islands Harbor. Data sets and images are used by Cascadia Research Collective and national whale distribution databases such as Journey North. The field season runs from January through October, capturing the presence of migrating gray whales and foraging blue and humpback whales. CINC volunteers also collect marine mammal sightings data, which is entered into the Sanctuary's online Marine Mammal Sightings Database. See Strategy AU.4 (4).

One of the functions of the CINC is bringing together the whale-watching industry on a number of Sanctuary-related issues. Whale-watching operators will be offered marine wildlife viewing workshops covering topics including Sanctuary regulations, the Marine Mammal Protection Act, and Endangered Species Act, and standardized whale-watching guidelines.

CINMS maintains and trains a base of over 150 CINC volunteers annually to provide naturalist interpretive services on whale-watching boats departing out of Santa Barbara, Channel Islands and Ventura Harbors. CINMS offers this as a service to the whale-watching industry (within the three

designated harbors) through a Memorandum of Understanding between the vessel operators and CINMS (NOS Agreement Code: MOA-2004-030/1121). Volunteers are available at varying times throughout the week and weekend. In addition, volunteers take their knowledge to the classroom by providing community outreach talks through the CINC Speaker's Bureau. CINC volunteers receive specialized training in identification, behavior and life history of marine mammals. The natural history of the Sanctuary, Santa Barbara Channel and the Channel Islands are emphasized. In addition, CINC volunteers receive training from the CINP to provide interagency interpretation on board CINP concessionaire vessels, and a subset of them receive special training to provide interagency interpretation on the islands.

Status: Program first began in 1995 and the "Whale Corps." CINMS initiated Naturalist Corps in 2001, and joined with CINP in 2004. Program to continue throughout years 1-5

Partners: Commercial whale-watching and marine excursion vessels; Cascadia Research Collective; Santa Barbara and Ventura County Schools; CIMSf; SBMM; Santa Barbara Museum of Natural History; Channel Islands National Park; National Marine Fisheries Service Office of Protected Resources

**(2) Develop Sanctuary Marine Watch Volunteer Program.** One of the goals of the NMSP is to allow multiple recreational and commercial uses of the Sanctuary compatible with resource protection. Recreational and commercial boats (whose impacts may be not only from consumptive activity, but from the boats themselves) can easily access CINMS' waters. Sewage discharge, pollution from fuel, illegal dumping, anchor-scarring, and seabird and marine mammal disturbance are all avoidable impacts. CINMS has developed a series of projects to involve volunteers and interns in activities to assist the site while educating them about the resources. Team OCEAN (Sanctuary Marine Watch), a volunteer-based, peer education program, will use interpretation to affect behavior and values to help achieve voluntary compliance with Sanctuary regulations. CINMS is building a volunteer-based, peer-interpretive enforcement program to work together with user groups in Sanctuary waters. Volunteers will impart information about Sanctuary resources, the benefits of protection, and the impact of the individual on the environment. Interpretive enforcement is intended to be both proactive and preventative in averting negative impacts before they occur.

Status: Initial program designed in 1998; boater consultations in 2003; pilot program to start in year 3

Partners: Recreational and commercial boating and diving industries; Channel Islands National Park; Chumash Maritime Association; local dive clubs; Santa Barbara Harbor; Ventura Harbor; Channel Islands Harbor; Department of Boating and Waterways; Clean Seas; Wildlife Care Network; Santa Barbara Maritime Museum; Santa Barbara Marine Mammal Center; Channel Keeper; USCG/Auxiliary; County of Ventura, Channel Islands Marine Sanctuary Foundation; NOAA Office for Law Enforcement; Sanctuary Education Team; United States Coast Guard Auxiliary

**(3) Integrate CINMS Volunteer Program Strategies into NMSP Volunteer Efforts.** CINMS will collaborate with multiple NMSP sites and the NMSP Volunteer Program Manager to integrate successful volunteer program strategies into a national volunteer plan. CINMS will provide data on hours and volunteers for the Channel Islands Naturalist Corps program, CINMS internship program, and other volunteer activities to the NMSP VolunteerNet web database. VolunteerNet was developed as part of the NOAA Strategic Performance Objective for Knowledgeable stewards: "Increase portion of population that is knowledgeable of and acting as stewards for coastal and marine ecosystem." In addition, the NMSP performance measure for volunteering (by 2010, increase by 25% the number of volunteer hours dedicated to NMSP science, public awareness, and resource protection activities) is reported on by using VolunteerNet. VolunteerNet was developed as a web-based tool for the purpose of recording, tracking,

and managing information on volunteer activities throughout the NMSS. In this capacity, VolunteerNet is intended to serve a twofold purpose: 1) Provide all volunteer coordinators with on-demand access to volunteer information and thereby facilitate greater administrative efficiency for managing volunteer labor; 2) Provide NMSP Headquarters with data on volunteer activities for reporting purposes; and 3) access to up-to-date volunteer contact information for communicating nationally.

Status: Establish by year 2 or in accordance with NMSP schedule

Partners: Multiple NMSP sites, Channel Islands National Park

**(4) Engage in Ocean Etiquette Programming.** The Ocean Etiquette Program seeks to develop guidelines and programs around responsible interaction with wildlife and habitats in the national marine sanctuaries. The NMSP, California national marine sanctuaries, and NOAA Fisheries have been working together to develop comprehensive guidance for viewing marine species and responsibly entering their habitats throughout the state. As a result, NOAA has created animal specific guidelines for every kind of ocean visitor in addition to the publication, "Responsibly Viewing California's Marine Wildlife: Handbook for Ocean Users". The handbook was developed to 1) promote voluntary compliance with existing federal and state wildlife protection laws and regulations, 2) raise public awareness about responsible viewing and stewardship principles, and 3) promote communication and coordination among California's ocean user groups and federal and state agencies.

In addition to the California wildlife viewing guidelines and the "Responsibly Viewing California's Marine Wildlife: Handbook for Ocean Users", CINMS and various partners are engaged in developing an Ocean Etiquette program at the site. This is a process that began with the handbook and subsequent workshops. The 2003 workshop was held at the release of the handbook to communicate the information contained in the book and gather initial community feedback. The 2004 Marine Wildlife Viewing Workshop was held to determine user group need for outreach messages and products, and to solicit further feedback on the handbook. Using feedback gathered at the 2004 workshop, the site and involved community user groups will address the next steps for product development. This may involve future workshops to bring together community user groups to discuss current issues pertaining to responsibly viewing California marine life. Community user groups include recreational and commercial boaters, recreational and commercial fishing interests, kayaking stores and guides, SCUBA divers, snorkelers, dive stores and dive vessel operators, whale watching vessels and sightseeing vessels, volunteers, naturalists, birders, and small aircraft operators. Additionally, CINMS will work with NMSP headquarters and other sites in developing outreach and management programs necessary for responsibly viewing wildlife in the Sanctuary if the need is identified through the Sanctuary, its partners or user groups.

Status: Program development began in 2003 and has continued to evolve; will be implemented across years 1-5

Partners: Cordell Bank, Gulf of the Farallones and Monterey Bay national marine sanctuaries; National Marine Sanctuary Program, National Marine Fisheries Service; CA Department of Fish and Game; California State Parks

## STRATEGY AU.4 – DEVELOPING OUTREACH TECHNOLOGY

- **Objective:** To provide timely and accurate information about the Sanctuary's natural resources, issues and activities as they occur
- **Implementation:** Education and Outreach staff

### Background

CINMS will expand its virtual, real-time and interactive capabilities to provide a more immediate and direct understanding of the natural resources, issues and activities as they occur. Through the use of advanced outreach technology such as websites, Sanctuary interactive kiosks, and audio podcasts, diverse audiences will be able to engage with the Sanctuary in a more dynamic and participatory manner.

As an offshore site, the easiest way for the public to come into contact with the CINMS is through a virtual experience. CINMS' website averages 10,000 unique visitors per month and offers everything from an online weather service to information on maritime heritage, the Advisory Council, the Channel Islands MPA network, research, an underwater video gallery and *What's New* pages. The diverse habitats, resources and unique setting of the CINMS offer the opportunity for the interpretation of regional biogeography, prehistoric Native American Chumash artifacts, paleontological discoveries, and historic shipwrecks.

### Activities (4)

#### (1) Expand Website Capabilities.

CINMS has developed a strong presence locally, nationally, and internationally through its website. The website is an important outreach tool enabling the Sanctuary to access and track thousands of monthly inquiries. The website also provides CINMS with a mechanism to provide important resource protection updates, list Sanctuary regulations, post Sanctuary Advisory Council meeting minutes, and information on education and volunteer opportunities. CINMS will expand its website outreach through the application of Internet technology in many different environments. CINMS will incorporate multi-media elements, including:



Figure 32. CINMS website homepage, 2008

- A dynamic shipwreck database - there are nearly 200 documented shipwrecks in the waters of the Channel Islands National Marine Sanctuary alone, this site will allow users to read about and watch online video explorations;
- Sound, streaming video and audio podcasting; and
- A marine mammal sightings database where you can record mammal sightings as well as search for them.

Taking these steps will allow the Sanctuary to deliver dynamic, real-time information to viewers and will be focused in the following areas: 1) improving communication with educators (distance learning for K–12, virtual teacher workshops, providing resources); 2) providing scientists, decision makers, and the

public easy access to CINMS research data base (intuitive querying of data, interfacing with GIS, interpretation of data for use in the classroom); and 3) providing visitors with a virtual experience and understanding about the Sanctuary (virtual flyovers and video capture from Sanctuary waters).

Status: Evolving since 2001; upgrades to continue across years 1-5

Partners: Various offices within NOAA; Sanctuary Education Team

**(2) Increase The Number Of CINMS Interactive Kiosks.** The Sanctuary and National Weather Service began exploring and developing touch-screen weather kiosks in 1998. Since then the Sanctuary and its partners have made great strides in improving and designing kiosk technology and content information for today's enhanced line of Sanctuary interactive kiosks. The first prototype Sanctuary interactive kiosk was installed at the Santa Barbara Museum of National History Ty Warner Sea Center in late April 2005. In the first 90 days of operation there have been over 2,100 users and nearly 300 hours of recorded use. The kiosk offers real-time weather information from the National Weather Service, site specific as well as National Program information. It also includes information from partners outside of NMSP. The kiosk program has gone through an extensive design process to come up with a "look and feel" that accommodates NMSP design standards, and guidelines from the federal Rehabilitation Act Section 508 and Americans with Disabilities Act (ADA).<sup>29</sup>

The Sanctuary interactive kiosks offer a high-impact visual and auditory showcase of all the treasures the Sanctuary has to offer. Users can learn about the research projects, education, outreach and resource protection programs, and extensive information on Sanctuary species and habitats. With the click of a button users can view underwater video of local shipwrecks and research projects currently underway in the Sanctuary. The kiosks also provide real-time weather information from NOAA weather products, allowing users to check offshore marine forecasts, tides and currents, swell models and sea surface temperatures. The result of the program is a better and more meaningful experience for visitors who get to see and interact with Sanctuary resources in a way not before possible.

The National Marine Sanctuary Program user interface is one of the most in-depth and content rich kiosks anywhere. Maintaining the program's commitment to outreach and education, the kiosk serves as an interactive collection of knowledge and information. The kiosk offers a wealth of information that is just a few clicks away from the public in a simple and easy to use touch screen interface. Kiosk users interested in learning about the National Marine Sanctuary Program can read about the sanctuaries and where they are located as well as the goals of the program itself. A truly interactive and multimedia experience keeps users engaged as they watch videos on scientists at sea or underwater habitats. They can even take a "Visual Journey" through the waters of the sanctuaries and see what treasures are contained in the ocean. In 2006 a kiosk was installed at West Marine in Channel Islands Harbor.

To reach a broader audience, CINMS will install eight more Sanctuary interactive kiosks at key departure points to the Sanctuary. Kiosks will be installed at the following locations:

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<sup>29</sup> Rehabilitation Act Section 508 requires that when federal agencies develop, procure, maintain, or use electronic and information technology, federal employees with disabilities have access to and use of information and data that is comparable to the access and use by federal employees who are not individuals with disabilities, unless an undue burden would be imposed on the agency. Section 508 also requires that individuals with disabilities, who are members of the public seeking information or services from a Federal agency, have access to and use of information and data that is comparable to that provided to the public who are not individuals with disabilities, unless an undue burden would be imposed on the agency. The ADA provides scoping and technical requirements for accessibility to buildings and facilities by individuals with disabilities.

- Santa Barbara Harbor (Santa Barbara);
- University of California Santa Barbara Outreach Center for Teaching Ocean Science;
- Santa Barbara Maritime Museum;
- Channel Islands Harbor fuel dock (Oxnard);
- Boating Instruction and Safety Center (Oxnard);
- Ventura Harbor (Ventura);
- Cabrillo High School Aquarium (Lompoc); and
- Long Beach Aquarium of the Pacific

Status: New kiosk prototype designed and installed in 2005; additional four sites by year 3

Partners: National Weather Service

**(3) Participate in National Telepresence (Oceanslive!) Initiative.** Telepresence takes advantage of cutting-edge technology to allow people to experience these special marine areas without ever getting wet. Using underwater cameras and scientific equipment, telepresence uses lightning-quick Internet2 connections to feed live, interactive video - as well as pre-recorded content - to distance learning centers, Boys and Girls Clubs after-school programs, exhibits in aquaria and interpretive centers, and a Web-based marine science portal. Combined with the resources of sanctuary marine science professionals, telepresence allows children, adults, and teachers a more meaningful educational experience. Through telepresence visitors do not passively view sanctuaries, but instead actively experience and explore these underwater worlds by taking control of underwater vehicles and cameras - an intimate, immersive experience. Telepresence greatly expands education and outreach possibilities for the NMSP and is expected to greatly increase public awareness of the program, especially among currently underserved audiences.

Since 2003, the NMSP has been engaged in planning activities to support the implementation of telepresence in CINMS. The Sanctuary is working in close partnership with Channel Islands National Park and the Ventura County Office of Education to place a series of underwater cameras in and around the Landing Cove on Anacapa Island, capturing a variety of environments. These cameras will not only serve the NMSP telepresence program, but also feed into the existing live broadcasts shown at the CINP visitors center in Ventura. The program is also working with the Marine Science Institute at UC-Santa Barbara to develop scientific monitoring equipment that can use this same, high-speed infrastructure.

Status: Under development since 2003; implementation to follow in years 1-2

Partners: CINP; Ventura County Office of Education; UCSB Marine Science Institute

**(4) Maintain Interactive Marine Mammal Sightings Database.** Over 18 species of marine mammals are documented annually by Channel Islands Naturalist Corps (CINC) volunteers (see AU.3, activity 1) in Sanctuary waters, including information on migratory species, resident species, strandings or entanglements, behavior, and associated marine life. In order to make the data more accessible to the public CINMS staff developed an interactive marine mammal sightings database in 2003. The database went online in early 2004 and enables the public to access and query marine mammal data collected primarily by CINC volunteers and Sanctuary staff. The public can also enter sightings into the database and create visual maps of data points.

Status: Developed in January 2004, maintenance in years 1-5

Partners: CINC volunteers; Signatory marine excursion vessels participating in the CINC program; Sanctuary Education Team

## STRATEGY AU.5 – GREATER SOUTHERN CALIFORNIA OUTREACH

- Objective: To establish a presence and identity for the Sanctuary and its various programs in the Ventura and Los Angeles region.
- Implementation: Education and Outreach staff

### **Background**

Increasing CINMS outreach to the greater Southern California area will help to: expand the Sanctuary's presence and identity in the Ventura and Los Angeles region; develop new education partners; provide education and outreach programs to new communities; and work towards building a larger and stronger constituency and stewardship of the Sanctuary. At the invitation of the Channel Islands Harbor in Oxnard, approximately 30 miles to the south of Santa Barbara, CINMS opened a southern office in 1999. The CINMS Ventura County Regional Office is located at the Marine Emporium Landing, "Gateway to the Channel Islands", and supports Channel Islands Harbor visitor walk-in traffic with CINMS displays and literature. Channel Islands Harbor, which is home to over 5,000 boat slips, supports a tri-county population base of 1,355,835 and is the closest mainland departure point to the CINMS, is the site of a new *Channel Islands Harbor Boating Instruction and Safety Center (CIHBISC)*. This Center will provide a forum in which to provide information about the Sanctuary for boaters in the Oxnard area. CINMS has also been able, and will continue to, provide Los Angeles area ocean science education programs with information about the southern California marine environment and the Sanctuary by participating in the Centers for Ocean Science Education Excellence West (COSEE-West).

### **Activities (3)**

**(1) Place Channel Islands Harbor Boating Instruction and Safety Center Exhibits, Interpretation Panels and Literature Units.** CINMS will work with the CIHBISC on a strategic plan that will include the designing and placing of exhibits, interpretation panels and portable literature distribution units. Sanctuary exhibits, interpretation panels and literature units will be in place by the opening of the CIHBISC.

Status: Planning assistance since 2001; to be completed in 2008-2009

Partners: Channel Islands Harbor, County of Ventura, California State University at Channel Islands and NGO's

**(2) Implement Outreach Plans and Volunteer Programs.** The best and most immediate vehicle for CINMS southern office outreach efforts is through the CIHBISC. The Center's programming will include not only boating instruction and safety, but marine biology, ecology, and oceanography. Programs will include both K-12 students and college-level programs administered by California State University-Channel Islands, two local community colleges and continuing education programs. CINMS will play a major role in providing a Sanctuary orientation and an ocean conservation ethic through educational programming at the CIHBISC. The successful "Oceans to Classrooms" program will be expanded to Ventura County, and will include partnerships with local operators, Island Packers, California State University Channel Islands, Channel Islands Marine Resource Institute, and the Ventura County Harbor Department.

CINMS is working with the CIHBISC on a strategic plan for a boating and waterways education program, program curriculum, exhibitory, a dockside touch-tank and water-based education activities such as a floating lab. Team OCEAN (Sanctuary Marine Watch), Channel Islands Naturalist Corps, and other volunteer opportunities will be available through the Ventura County Regional Office. A Sanctuary

interactive kiosk with up-to-date NOAA weather reports and Sanctuary interpretive panels and information will be placed on the dock in front of the Center. Once regional needs have been evaluated, interpretive signage, partnerships, additional Sanctuary interactive kiosks, and outreach programs will be put in place throughout the county.

Status: program planning began in 2001; implementation will occur across years 1-5

Partners: Ventura County Schools; UC Santa Barbara; Island Packers; Channel Islands Marine Resource Institute; Channel Islands Marine Floating Laboratory Program

**(3) Implement COSEE-West Programs.** In 2001, the National Science Foundation (NSF) funded the development of the Centers for Ocean Science Education Excellence (COSEE) in order to promote ocean education as an interdisciplinary tool for improving science education in the 21<sup>st</sup> century. Funding is used to foster communication and coordination among ocean science education programs nationwide and to promote partnerships between ocean science researchers and educators. COSEE-West is one of seven centers that was awarded funding by NSF and its partners including the University of Southern California, the University of California Los Angeles and the Los Angeles Unified School District (LAUSD). The LAUSD is the nation's second largest public school district with 677 schools and 270 science centers. There are over 1 million students enrolled in LAUSD and the population is composed largely of immigrant and English-limited students. CINMS is a member of the COSEE-West Education Advisory Committee and assists in coordinating the LiMPETS (see AU.1, activity 5) program in Los Angeles County, teacher workshops and lectures, and creating classroom linkages to the southern California marine environment and the Sanctuary.

Status: Began in 2001, program development continues in years 1-5

Partners: UCLA Institute of the Environment, USC Sea Grant and Wrigley Institute, Los Angeles Unified School District, Los Angeles County Museum of Natural History, Aquarium of the Pacific, California Science Center, Cabrillo Marine Aquarium, UCLA Discovery Center

## STRATEGY AU.6 – DEVELOPING EDUCATION & OUTREACH TOOLS & PRODUCTS

- Objective: To provide Sanctuary information to a widely diverse audience.
- Implementation: Education and Outreach staff

### **Background**

CINMS produces a variety of educational tools and products to help reach targeted and general audiences through our education and outreach program(s). CINMS educational products enable CINMS to provide information to a diverse audience including divers, boaters, commercial fishers, teachers, students and the general public. They are distributed through a variety of venues including conferences, outreach and community events, teacher workshops, presentations, media packets, and in the field by volunteers, enforcement agencies, and other agencies co-managing the waters around the Channel Islands. Educational products play a vital role in raising awareness and knowledge about Sanctuary resources and regulations. These products also help to build stewardship for the Sanctuary. In addition to outreach products, the Sanctuary's educational cruises, web site, interactive kiosks, and outreach events are valuable tools for educating the public about Sanctuary resources.

### **Activities (5)**

**(1) Maintain Various Print Publications.** Following is a list of current CINMS brochures, posters, or publications that will be updated, as appropriate, and restocked as needed.

#### Marine Mammal Guide

A concise and comprehensive waterproof field guide developed in cooperation with the Olympic Coast, Cordell Bank, Gulf of the Farallones, Monterey Bay, and Hawaiian Islands Humpback Whale NMS's.

#### Alolkoy

A nationally distributed annual newsletter, produced jointly by CINMS and the California Marine Sanctuaries Foundation; offers highlights into current Sanctuary and regional issues, research and education programs. This publication also serves as an annual report.

#### Annual Research Report

An overview of the year's research activities in and around the Sanctuary. A useful information piece for both scientists and the layperson.

#### Boater Safety Tips Brochure

A brochure including information related to boating safety, regulations on discharge in the ocean and Sanctuary, clean boating practices, and local marine refuse stations. This publication is a partnership effort among CINMS, CINP, Ventura Power Squadron, County of Ventura, and CDFG.

#### Protecting Our Seabirds

A bilingual (Spanish and English) brochure targeting pier and jetty fishermen, kayakers, and boaters. The brochure includes: general information about reducing impacts to seabirds, tips while fishing and boating, and seabird viewing guidelines. Hotline information is included to report injured or entangled seabirds.

Things to Do

A brochure with activities for visitors, providing contact information on nearby harbors. Includes information on pinnipeds, whales, dolphins, and sharks

Protecting Your Channel Islands

A brochure describing the Channel Islands MPA network provides information about different jurisdictions protecting resources of the Channel Islands, and highlights locations for activities such as diving, camping, and anchoring. This brochure has been translated into Spanish.

Common Fishes of the CINMS

Includes images of fish commonly seen in both the Channel Islands and Monterey Bay NMS's. A good underwater reference for divers and snorkelers.

Sharks of The Channel

A full-color poster with images of the seven most common sharks in the Sanctuary.

Channel Islands Aerial View

A full-color poster of an aerial photograph showing the four northern Channel Islands from the perspective of Anacapa Island looking west.

3D Bathymetric Map

A poster featuring a GIS-based, three-dimensional perspective map of CINMS.

Chumash Tomol Poster

A poster highlighting the importance of the living Chumash Native American culture to the Santa Barbara Channel region and CINMS. The poster, designed by the Chumash Maritime Association and produced by CINMS, has a Chumash story on the back and an interpretation of some of the important elements and symbols of traditional Chumash culture used in the poster design.

Channel Islands Marine Reserves...Wild for the Future Poster

A two-sided, full color educational poster with beautiful photographs of marine life and recreational activities that occur in the Channel Islands MPA network, as well as maps showing MPA locations, and key species and habitats found in the MPAs. Also included are classroom ideas for K-12 teachers.

Status: Ongoing since mid-1990s; annual updates to products as needed

Partners: Channel Islands National Park, California Department of Fish and Game, and Chumash Maritime Association, SET (Sanctuary Education Team, which is a working group of the Sanctuary Advisory Council), and others

**(2) Support Various Other Educational Materials.** The following is a list of current and future classroom and educational materials developed and to be maintained by CINMS.

Channel Islands Naturalist Corps Training Manual

A training and reference manual for CINC volunteers containing information on the biology, distribution and natural history of marine life found within the Sanctuary; oceanography of the Channel; historical resources; Sanctuary regulations and Sanctuary research and monitoring programs. (See Strategy AU.3)

*Mountains to Sea Educational Material*

For grades 4–8. Developed by the Youth Education Committee of Project Clean Water. Project Clean Water is a unified community effort to clean up Santa Barbara County’s creeks and beaches with members from the City and County of Santa Barbara and local organizations. (See Strategy AU.1)

*Team OCEAN: Sanctuary Marine Watch Classroom Educational Material*

Educational material to be developed/updated for prospective Sanctuary Marine Watch volunteers containing information on marine protected areas, biodiversity and marine conservation, marine habitats and living resources, potential impacts of recreational activities, and Sanctuary management responsibilities and regulations. (See Strategy AU.3)

*Mapping an Ocean Sanctuary Classroom Educational Material*

A curriculum guide using ArcView software to explore maps and databases showing biological, geological and economic features of the Channel Islands National Marine Sanctuary. Some specific topics covered in the Mapping an Ocean Sanctuary curriculum include storm water pollution, environmental monitoring, sea surface temperature effects on fish distribution and marine protected areas.

*Status:* Above pre-existing education materials developed from 1998-2002 and updated periodically; existing materials to be updated and maintained throughout years 1-5 as appropriate; Team OCEAN materials to be updated by year 3

*Partners:* Numerous partners including, Center for Image Processing in Education, Project Cleanwater, SET (Sanctuary Education Team - a working group of the Sanctuary Advisory Council)

**(3) Support Other Outreach Materials.** The following is a list of outreach materials developed and to be maintained by CINMS.

*CINMS Slide Library*

Contains thousands of images of regional marine resources taken by local photographers, researchers and Sanctuary staff. This extensive image inventory is used to develop Sanctuary educational products, to support web content, and for Sanctuary publications.

*Exploring the Channel Islands National Marine Sanctuary DVD*

An interactive overview of the geography of the Channel Islands, three-dimensional Island fly-bys, information on marine life of the Channel and Sanctuary programs. DVD is compatible with both Macintosh and Windows operating systems.

*Encyclopedia of the Sanctuary*

An online interactive reference guide to over 100 species of mammals, fishes, birds, invertebrates, and plants found in CINMS. Produced in cooperation with The Ocean Channel/Ocean.Com and the National Marine Sanctuary Foundation.

*Sanctuary Interactive Kiosk*

Provides real-time weather data twenty-four hours per day for mariners, fishers, divers and other Sanctuary user groups through an interactive computer touch-screen. Weather component of the kiosk is available on the CINMS Website. Additional Sanctuary interactive kiosks are slated for installation at locations convenient for Sanctuary recreational and commercial user groups (see Strategy AU.4)

Website

Up-to-date information regarding education, research, cultural resources and resource protection, Advisory Council, other public events and meetings Sanctuary curriculum, research data, Internet workshops, distance learning and chat sessions (see Strategy AU.4).

Signage and Interpretation Panels

Sanctuary educational signs and interpretation panels are currently posted at: 1) City of Santa Barbara Shoreline Park; 2) Ventura Pier; 3) Outdoors Santa Barbara Visitor Center; 4) Channel Islands National Park Visitor Center; 5) Santa Barbara Museum of Natural History Ty Warner Sea Center; 6) South Coast Watershed Resource Center; and 7) Cabrillo High School Aquarium. Future locations include: 1) Santa Barbara Zoo (in Spanish and English); 2) Santa Barbara Harbor; 3) Ventura Harbor; 4) Channel Islands Harbor; 5) Channel Islands Boating Instruction and Safety Center; 6) Channel Islands National Park (Santa Barbara, Anacapa, Santa Cruz, Santa Rosa, San Miguel); 7) University of California Santa Barbara Outreach Center for Teaching Ocean Science; and 8) California State Parks (El Capitan and Refugio).

3D Bathymetric Terrain Model

GIS-based, three dimensional perspective model of CINMS that is located in the CINMS Ventura County Field Office in an area that is frequented by visitors.

Living Journal

Accessed through the CINMS Website, the Living Journal provides a firsthand perspective on local and national projects and events.

CINMS Media B-Roll

CINMS maintains current b-roll footage of Sanctuary living resources; maritime heritage resources; and resource protection, research, and education programs in a format compatible for television media.

CINMS High Definition Film

The Sanctuary is working with NOAA's National Ocean Service Media Center to create a 20-26 minute high definition film and 1-2 minute video trailer. This film will take viewers on a tour of the Sanctuary and education them about the unique ocean ecosystem of the Channel Islands. Ocean literacy will be enhanced by examining the interconnectivity of land and sea.

Status: Most of the above-listed outreach materials developed and updated from 2000-2004; updates to continue through years 1-5, as appropriate. The CINMS High definition film is expected to be complete in 2008

Partners: Numerous partners including Green Meadow Entertainment, The Ocean Channel and others

**(4) Sponsor Sanctuary Cruises.** Each year the Sanctuary sponsors a variety of public educational cruises aboard different vessels. These cruises include kayaking, diving and wildlife viewing and are targeted toward varying audiences including local residents, tourists, teachers, students, and community groups. Sanctuary staff and volunteers facilitate hands-on activities such as oceanography experiments, fish identification, marine mammal and seabird identification, fish surveys, and wildlife viewing to encourage an understanding and stewardship for Sanctuary resources.

Status: Common practice since designation; will continue through years 1-5

Partners: Concessionaire vessels to the Channel Islands National Park, other commercial marine excursion vessel operators, and numerous other education partners

**(5) Participate in Outreach Events.** CINMS participates in over 35 outreach events each year including whale festivals, harbor festivals, boat shows, fishing conventions, dive industry events, county fairs, and science fairs. Attendance at these events varies from 60 to 6,000 per day. They represent a broad geographic area that includes Santa Barbara County, Ventura County, and Los Angeles County. Presence at these community outreach events provides CINMS an opportunity to exhibit images of Sanctuary resources, distribute educational products, provide hands-on activities related to Sanctuary programs, and encourage visitation to the Sanctuary with a broad audience interested in a variety of marine related activities such as ocean conservation, recreational boating, diving, and wildlife viewing. CINMS education staff participates on a variety of event planning committees to promote awareness of the Sanctuary.

Status: Ongoing activity since designation that has grown in scope; will continue throughout years 1-5

Partners: Numerous partners, Channel Islands National Park



**Figure 33.** Outreach products are widely disseminated throughout the Sanctuary community. (CINMS)

## STRATEGY AU.7 – VISITOR CENTER SUPPORT & DEVELOPMENT

- Objective: To maximize the Sanctuary's regional public exposure through the development of exhibits and programs at planned and developed marine and natural resource-based visitor centers.
- Implementation: Education and Outreach staff

### **Background**

While CINMS does not currently maintain its own independent visitor or education center, it maintains exhibits at a variety of visitor centers and similar facilities operated by partner organizations. In 2003 Booz Allen Hamilton, a strategy, management and technology consulting firm, produced a Facilities Master Plan for CINMS adopted by the NMSP. The plan contains an assessment of and recommendations for pursuing various existing and potential new exhibit spaces, visitor centers, signage locations, an analysis of existing Sanctuary facilities, and a recommendation for expanding office space (see Strategy OP.7 for more information about office space expansion).

Over the next five years, the Sanctuary will complete implementation of a CINMS Master Facilities Plan to maximize CINMS' regional public exposure through the development of exhibits and programs at planned and developed marine and natural resource-based visitor centers. These venues, which are represented in the activities of this strategy, provide an important opportunity to display, promote and interpret CINMS programs and products while enhancing and leveraging a variety of existing and new partnerships.

### **Activities (7)**

**(1) Partner with the Outdoors Santa Barbara Visitor Center.** The Outdoors Santa Barbara Visitor Center is a unique partnership among four government agencies: 1) Channel Islands National Park; 2) Los Padres National Forest; 3) the City of Santa Barbara; 4) the Santa Barbara Maritime Museum; and 5) CINMS. Perched on the fourth floor of the Waterfront Center in the Santa Barbara Harbor, this center is completely staffed by a paid volunteer coordinator and volunteers. Through tile murals representing the Chumash *Rainbow Bridge* story, a computer station and a wayside exhibit featuring living and historical resources of the region, visitors are provided with opportunities to learn about the different ways each agency protects the resources. This interagency partnership also provides improved public service at a reduced cost by the sharing of resources to develop and operate this Center in the Santa Barbara Harbor. CINMS staff will continue to support the Center's operations and ensure CINMS educational materials and displays are kept updated.

Status: The center opened in 2000; CINMS support for operations to continue throughout years 1-5

Partners: Channel Islands National Park, U.S. Forest Service, City of Santa Barbara; Santa Barbara Maritime Museum added as a partner in 2007

**(2) Partner with the Santa Barbara Museum of Natural History's Ty Warner Sea Center.** Over the last decade, the Santa Barbara Maritime Museum has partnered with the Sanctuary in the development and implementation of several highly successful projects. One such project is the Sea Center on Stearns Wharf in Santa Barbara. Over the years, the Sea Center evolved from a casual, walk-in visitor center into



**Figure 34.** The Santa Barbara Museum of Natural History Ty Warner Sea Center has undergone significant revitalization. (Joanne Calitri)

a community education resource center serving more than 70,000 visitors and 7,000 school children each year. The Sea Center was closed for the past few years for major renovations, and reopened its doors in 2005 as a dynamic new education center. The new Ty Warner Sea Center represents the leading edge of museum exhibit design and interactive experience, utilizing both technology and trained staff to create a fun, engaging, interactive visitor experience featuring: interactive exhibits designed to help visitors experience scientific discovery; opportunities to work like scientists, sampling and testing ocean water, studying animal behavior, and examining microscopic marine life; live tidepool animal encounters; a theater showcasing the wonders of the Santa Barbara Channel; and several exhibits on the CINMS,

including a touch screen Sanctuary interactive kiosk. CINMS has worked and will continue to work closely with the Ty Warner Sea Center to bring Sanctuary resources and programs to the public through use of Center's trained staff, cutting edge technology, planned school programs, and high level of public visitation.

**Status:** CINMS assistance with exhibit design from 2002-2004; center reopened in 2005; CINMS assistance with development of Sea Center Interactive Theater in 2005; support, maintenance and upgrade of CINMS exhibits and Center programs to continue over years 1-5

**Partners:** Santa Barbara Museum of Natural History Ty Warner Sea Center

**(3) Maintain Exhibits for the Cabrillo High School Aquarium.** The Cabrillo High School Aquarium is a newly renovated and expanded aquarium (managed by the students of Cabrillo High School), featuring a cold water reef and animals, touch tank and exhibit of living resources of CINMS. The CINMS has designed and developed interpretive exhibits (including a 3-dimensional model of the Sanctuary showing the depth contours around the Channel Islands) and a Sanctuary interactive kiosk displaying real-time weather conditions in and around the Sanctuary. These interactive exhibits educate visitors about the role and importance of the CINMS protecting the marine resources of the region. The CINMS will maintain these exhibits and continue to work with high school and aquarium staff to develop educational programs and products highlighting Sanctuary resources and technology tools.

**Status:** Design and installation of exhibits 2000-2003; maintenance and educational program develop to continue over years 1-5, as appropriate

**Partners:** Cabrillo High School

**(4) Partner with the Channel Islands Harbor Boating Instruction and Safety Center (CIHBISC).**

CINMS' presence is an integral part of the continued planned development of the CIHBISC (see AU.5, activity 1). CINMS staff will provide oversight in planning Sanctuary exhibits, education programs and an outside visitor center overlooking the Channel Islands. CINMS staff will also maintain a board member seat on the Channel Islands Harbor Foundation.

Status: Staff assistance with planning and development began in 2001; upon completion and opening of the Center, ongoing exhibit and education programming support to continue, as needed, throughout years 1-5

Partners: Ventura County Harbor Department, Channel Islands Harbor, Channel Islands Harbor Foundation, Channel Islands Harbor Boating Instruction and Safety Center

**(5) Work with the South Coast Watershed Resource Center.** This Center is a learning and educational resource facility aimed at enhancing public awareness of Santa Barbara County's watershed system. Program themes include watershed restoration and water quality, with an emphasis on helping visitors and the local community understand the connection between healthy watersheds and individual personal habits. CINMS has worked with the Center to install a nautical chart tile map of the Sanctuary and CINMS interpretive signage at the entrance to the building, and has contributed watershed-based educational curriculum to the Center. CINMS staff will continue to work with the center on educational programming and exhibits, and will look to the Center as a partner as steps are taken to develop a Sanctuary water quality program (see Strategy WQ.2 – Water Quality Protection Planning).

Status: Partnership activities since 2001, CINMS developed an interpretive sign at the entrance to the center and assisted with development of island tile mosaic to continue partnership as appropriate over years 1-5

Partners: Community Environmental Council and Art From Scrap

**(6) Maintain and Improve CINMS Presence at Channel Islands National Park Visitor Center.** CINMS will continue its ongoing partnership with the Channel Islands National Park Visitor Center in Ventura, which receives thousands of visitors each year. CINMS maintains an exhibit, provides brochures, and contributes to the reference library. CINMS will partner with the Channel Islands National Park Visitor Center to seek funds to develop a new interactive Sanctuary exhibit in the Center's lookout tower. The exhibit will highlight Sanctuary resources such as marine habitats and their associated species.

Status: Maintenance of CINMS presence in Visitors Center has been ongoing for several years. Initial planning for new Sanctuary exhibit began in 2003 and continues; implementation schedule dependent upon future capital facilities funding.

Partners: Channel Islands National Park

**(7) Assist in Development of the Outreach Center for Teaching Ocean Sciences (OCTOS).**

A 2003 CINMS Facilities Master Plan recommends NMSP investment in a proposed new facility at the University of California Santa Barbara (UCSB) as a best value option for securing additional office space while also enhancing exhibits and visitor center services. UCSB's Marine Science Institute (MSI) has for several years partnered and collaborated with CINMS on many research, monitoring and educational programs and projects. MSI approached CINMS in 2002 with the idea of constructing a state-of-the-art education center on campus at a site next to the MSI building that could also provide needed additional CINMS office space. From this initial idea UCSB took the lead on fundraising. In 2004 the NMSP provided some initial funding for preliminary design and feasibility work. Then, in fiscal year 2005, Congress awarded \$4 million to the project. An additional \$3 million was awarded by Congress in 2006. These funds are currently being applied toward development of a detailed design for the proposed

combined CINMS office space and Outreach Center for Teaching Ocean Sciences (OCTOS). Fundraising by UCSB and MSI will continue. CINMS would ultimately not own the new OCTOS/office space facility, but would enter into a long term lease with UCSB.

OCTOS is still in the design phase, but is expected to feature a variety educational opportunities that will enhance public understanding and appreciation of the marine environment and CINMS in particular, including: a seawater center with touch tanks that will provide hands-on learning experiences about marine life; a technology center that will offer interactive learning opportunities; a digital global projection sphere; a high-tech “Reality Theater” capable of supporting live, interactive telepresence communications around the world; video and microscope projection installations; and virtual reality environments.

CINMS and NMSP staff will continue to work jointly with UCSB-MSI on development of OCTOS, including Sanctuary-related exhibits and educational experiences. CINMS staff will continue to play a leading role in OCTOS design work, including serving as co-chair the UCSB’s project Building Committee and serving as a liaison to CINMS and NMSP staff involved in or affected by the project. CINMS staff will also assist with a variety of project oversight duties during the construction phase.

Status: Joint planning with UCSB/MSI in progress since 2003; CINMS design assistance through years 1-2; assistance with construction oversight in years 3-4; possible OCTOS opening in year 4 or 5

Partners: UCSB-Marine Science Institute

## STRATEGY AU.8 – MPA NETWORK EDUCATION

- Objective: To raise awareness and understanding among the general public and Sanctuary users of the system of marine reserves and conservation areas within the Sanctuary.
- Implementation: Education and Outreach staff

### **Background**

The Sanctuary contains a network of marine protected areas including ten marine reserves (no-take zones) and two conservation areas (limited-take zones), with the areas in state waters designated by the State of California, and the areas in federal waters designated by NOAA (see Figure 51 in the Resource Protection Action Plan, p. 180). Since 2002, the CINMS education programs and services have helped the general public and Sanctuary users understand what and where the marine reserves and conservation areas are, why they were established, and what can be learned from them. This strategy identifies MPA network education actions currently underway and how they will be maintained and enhanced over the five year horizon of this management plan.

### **Activities (5)**

**(1) Implement SET Recommendations for MPA Network Education and Outreach Products and Services.** The Sanctuary Education Team (SET) is a working group of the Sanctuary Advisory Council established in January 2002 to advise and make recommendations on marine educational issues related to the Sanctuary. The SET conducted a needs assessment of Sanctuary user groups to determine the best messages and delivery mechanisms for development of MPA network educational programs and materials. In late 2002 the SET recommended and the Advisory Council endorsed a comprehensive suite of education strategies, programs and products to inform various sectors of the public about the Channel Islands MPA network (contained in a product referred to as the “SET marine reserves matrix”). Some of these SET recommendations have been implemented by CINMS staff, but much remains to be done and will continue to be developed and implemented over each of the five years of this management plan (and is reflected in many of the activities of this strategy). In 2004 and 2005 the SET focused on developing education and outreach presentations to support public education about the Channel Islands MPA network. Staff has assisted with that effort and will continue to support SET involvement in presentation design and delivery. In addition, wherever possible, MPA network components will be incorporated into existing Sanctuary education and outreach activities (such as those listed at AU.1, AU.2, AU.3 and AU.6).

Status: SET advice in 2002 and 2003; implementation to continue across years 1-5

Partners: Sanctuary Education Team, Advisory Council

**(2) Develop Printed Educational Products.** Printed educational products have been and will continue to be developed to raise awareness about the marine reserves and conservation areas. These include brochures, posters, maps, publications and other existing materials listed at AU.6 (activities 1 and 2), and will also involve new product development as needed and appropriate.

Status: CINMS MPA network-related printed products developed from 2002 through 2005, maintenance of supplies, update of materials, and development of new products, as appropriate, to continue through years 1-5

Partners: California Department of Fish and Game, Sanctuary Education Team, Channel Islands National Park

**(3) Conduct Sanctuary Cruises.** Sanctuary Cruises have and will continue to be conducted as educational field trips to the Sanctuary, including visits to MPA network sites (four times per year).

Status: Occasional MPA network cruises have taken place from 2003-2005; additional cruises (at least 4 per year) to be implemented throughout years 1-5

Partners: California Department of Fish and Game, Channel Islands National Park, and numerous other potential partners

**(4) As Part of the California National Marine Sanctuaries Signage Plan, Develop, Place and Maintain Interpretive Signs and Kiosks.** CINMS will develop, place and maintain marine MPA network signage at various Sanctuary departure points, including the Channel Islands. Sanctuary Education Team recommendations (provided in 2002) will help guide placement. Signs will provide basic information about the CINMS, including the purpose, location, resources and regulations for the MPA network. At local ports and harbors, upgrade and maintain CINMS touch-screen interactive kiosk system to include information about the MPA network.

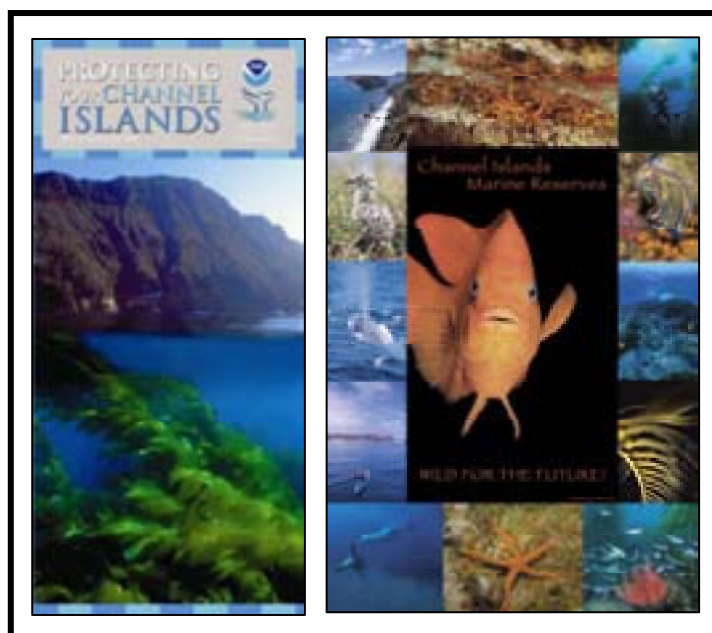
Status: Signage implementation began in 2003-2004, and will ramp up through years 1-2; upgraded signage to follow depicting the full MPA network completed in 2007

Partners: CA Department of Fish and Game, Channel Islands National Park, Sanctuary Education Team

**(5) Maintain MPA Network Website.** Maintain and enhance a comprehensive public information center on the Channel Islands MPA network through the Sanctuary's website.

Status: MPA network web site began in 1999 and has evolved considerably since then; continued enhancements to occur over years 1-5

Partners: CA Department of Fish and game, Sanctuary Education Team



**Figure 35.** Marine Protected Area (MPA) network outreach products

## STRATEGY AU.9 – MULTICULTURAL EDUCATION

- Objective: To build Sanctuary stewardship and increase understanding of ocean related threats within the Hispanic communities of Santa Barbara and Ventura counties.
- Implementation: Education and Outreach staff

### **Background**

According to the U.S. Census Bureau (2000a) approximately 34% of the population in Santa Barbara and Ventura counties is Hispanic (also known as Latino) and in California 33% of the population is Hispanic. However, community participation in CINMS programs and services did not represent the demographic composition of the region according to the public scoping findings for the Sanctuary's management plan. CINMS strives to foster increased community participation in resource protection. Toward that end, CINMS conducted a thorough needs assessment for multicultural marine education and outreach in 2004-2005. Utilizing the findings of the needs assessment study, a Multicultural Education for Resource Issues Threatening Oceans (MERITO) program logic model was designed that allowed Sanctuary staff to determine and measure the program's short and long-term outcomes, foresee the required resources, and plan the activities required for achieving the program's goals and objectives.

Although CINMS has not historically followed an official multicultural education plan, the Sanctuary does have a history of success in working with local education partners to create K-12 educational programming for Latino students in Santa Barbara County. In 1987, the Sanctuary funded the development of an integrated marine science program called "*Los Marineros*" for 5<sup>th</sup> grade students in Santa Barbara County Schools. Administered by the Santa Barbara Museum of Natural History until 2005, the program served over 1000 students annually, with over 70% of the students representing the Latino community.

The NMSP supports using the Monterey Bay National Marine Sanctuary's (MBNMS) Multicultural Education Plan as a model for other national marine sanctuaries across the nation. Based on the findings of the 2004-2005 needs assessment and on the success of the MBNMS Multicultural Education for Resource Issues Threatening Oceans (MERITO) program, CINMS developed its own multicultural education plan to provide expanded bilingual outreach and education about marine and coastal environments and their conservation to students, teachers, adults, and families. The proposed education programs, include education and outreach strategies, media campaigns, materials, and products which address how families can protect coastal watershed areas, how they can take action in their own lives to protect the ocean, and why ocean protection is a role all coastal citizens share.

### **Activities (3)**

**(1) Retain Bilingual Community Liaison.** CINMS hired a bilingual community liaison in 2004 to conduct and coordinate the needs assessment survey and analysis. Since that time, this position has been retained through a combination of the Sanctuary budget and grant funding. CINMS will continue to take steps to retain this position and solidify its base funding in order to support implementation of the multicultural education program.

Status: Liaison hired in 2004; CINMS to retain services through years 1-5

Partners: Internal

**(2) Develop and Adapt Multi-Cultural Elements to CINMS Programs and Materials.** CINMS will build multicultural elements into existing CINMS education and outreach programs that will be selected and

prioritized based on the strategic plan developed from the needs assessment survey and workshop and the MERITO strategic plan.

#### MERITO Academy (K-12 and after school)

The Sanctuary is developing and implementing programming for Hispanic youth (4<sup>th</sup>-8<sup>th</sup> grade level) to increase awareness about CINMS within the Hispanic community. For example, the incorporation of the CINMS Argonauts program into the MERITO Academy program. The MERITO Academy consists of training Hispanic serving teachers to utilize the state aligned Sanctuary curriculum, and year round support to the teachers in the class and during the related field activities which are designed to raise stewardship for the Sanctuary and for ocean protection.

#### Adult Education Programs (see AU.2 activity 2)

CINMS staff will develop a lecture/field trip about the Sanctuary and present it in English as a second language (ESL) classes. Santa Barbara City College, Ventura College, and Oxnard Adult Education School each offer ESL classes. Also part of the MERITO strategic plan is the development of Sanctuary and marine education content for ESL adult student curriculum and a lecture/field trip about the Sanctuary for presentation at English as a Second Language (ESL) classes.

Other strategies include:

- Bilingual media campaign;
- Bilingual outreach materials;
- Internship opportunities for bilingual graduate and undergraduate students; and
- Participation of CINMS staff at Hispanic community events

Status: To be conducted from years 2 through 5

Partners: MBNMS, SET, Boys and Girls Clubs of Santa Barbara and Ventura Counties, California Department of Education-Migrant Education, California State Parks, California State University at Channel Islands, Casa de La Raza, Channel Islands National Park, Generation Communications (Ojai Valley Youth Foundation), Girls Inc. in Santa Barbara and Carpinteria, Girl Scouts of America, Golden State Environmental Education Consortium, Guadalupe Dune Center, Los Angeles Unified School District, UCSB chapter of Movimiento Estudiantil Chicano de Aztlán (MEChA or the Chicano Student Movement of Aztlán), Oxnard City College, Santa Barbara City College, Santa Barbara Hispanic Chamber of Commerce, Santa Barbara Maritime Museum, Santa Barbara Museum of Natural History, Santa Barbara Office of Education, Santa Barbara SEA, Society of Advancement of Chicanos and Native Americans in Science, Splash the Trash, UC Cooperative Extension (Agua Pura Leadership Institute), UC Santa Barbara/Marine Science Institute, UCSB Latino fraternities and sorority organizations and Latino service organizations, Ventura Community College, Ventura Superintendent of Schools office, Ventura Unified School District, adult education schools offering ESL classes

**(3) Implement the Multicultural Education Strategic Plan.** Based on common themes and programs/products generated from the needs assessment and workshop, and developed into a strategic plan, CINMS has begun implementing the multicultural education strategic plan in Santa Barbara and Ventura County communities.

The CINMS MERITO Strategic Plan includes education and outreach strategies to be implemented within a five-year time-frame in collaboration with community partners. The plan is geared toward reaching sub-audiences within the Hispanic community such as youth, teachers, Spanish speaking adults, migrant families, community leaders and representatives of the agriculture and restaurant industries. The program

focuses primarily on fostering Sanctuary stewardship, increasing knowledge of ocean related threats such as water quality, over fishing and global warming, while promoting environmentally responsible living. Main themes of the MERITO Strategic Plan include:

- *Community Based Bilingual Outreach Program.* Serving Hispanic students (middle school level), adults, migrant families, community leaders and agriculture and tourism representatives.
- *Teacher Training and Hispanic Students Internship Program.* Address teacher professional development opportunities for Hispanic-serving teachers and youth program educators on marine sciences and resource protection and the need for paid internship opportunities for Hispanic graduate and undergraduate level students.
- *Bilingual Outreach Program.* To increase visitation to the Channel Islands and outreach centers (such as park visitors-centers, museums and aquariums), and collaboratively provide comprehensible natural resource protection information.
- *Communications Plan.* Targeting at a larger scale all age levels of the Hispanic audience through a comprehensive media campaign and communication tools in collaboration with partner organizations.
- *Bilingual Outreach Products and Materials.* Produce bilingual products conveying Sanctuary related information, watershed and ocean connections and promote environmentally friendly practices.

Status: Initiated in 2006, ongoing thereafter

Partners: MBNMS, SET and potentially many others, including: Channel Islands National Park, Ventura County Superintendent of Schools Office, Santa Barbara County School District, UCSB Marine Sciences Institute, Santa Barbara Maritime Museum, Boys and Girls Clubs of Oxnard, Ventura and Santa Barbara, UC Cooperative Extension LA and Santa Barbara County, Santa Barbara Museum of Natural History – Ty Warner Sea Center, Clear Channel Broadcast, Oxnard City, Santa Barbara County Water Agency, Santa Barbara City Creeks Outreach Division, El Consilio, Future Leaders of America, Oxnard Network Coalition, El Centrito de la Colonia, La Casa de la Raza, CAUSE, Head Start, Oxnard College, Santa Barbara Community College, Ventura College, Migrant Education Offices of Ventura and Santa Barbara, UC Channel Islands, Ojai Valley Youth Foundation, Ocean Futures Society, Heal the Ocean, Environmental Defense Center, Community Environmental Council. Island Packers, Truth Aquatics, Aquarium of the Pacific, California Department of Parks and Recreation Ventura County and Santa Barbara County

**Table 4. Estimated Costs for the Public Awareness & Understanding Action Plan**

Strategy	Estimated Annual Cost (in thousands)*					Total Estimated 5 Year Cost
	YR 1	YR 2	YR 3	YR 4	YR 5	
AU.1: Education Program Development	\$30	\$91.5	\$91.5	\$81.5	\$81.5	\$376
AU.2: Community Involvement	\$32	\$55	\$56	\$57	\$58	\$258
AU.3: Team OCEAN	\$38.5	\$26	\$24	\$24	\$24	\$136.5
AU.4: Developing Outreach Technology	\$52.5	\$99	\$99	\$56	\$56	\$362.5
AU.5: Greater Southern CA Outreach	\$0	\$40	\$45	\$50	\$30	\$165
AU.6: Education & Outreach Tools & Products	\$111.5	\$112.5	\$112.5	\$112.5	\$112.5	\$561.5
AU.7: Visitor Center Support & Development	\$20^	\$20^	\$60^	\$32^	\$27^	\$159
AU.8: MPA Network Education	\$49	\$16	\$16.5	\$17.5	\$18	\$117
AU.9: Multicultural Education	\$0	\$27**	\$30	\$35	\$40	\$132
<b>Total Estimated Annual Cost</b>	<b>\$333.5</b>	<b>\$487</b>	<b>\$534.5</b>	<b>\$465.5</b>	<b>\$447</b>	<b>\$2267.5</b>

\* Cost estimates are for “programmatic” funds, which exclude base budget funding requirements (salaries, overhead, etc.).

\*\* Contributions from outside funding sources also anticipated.

^ Additional funding will come from NMSP Capital Facilities allocations.

## Addressing the Issues – Strategies From Other Action Plans

In addition to the strategies identified in this Public Awareness & Understanding Action Plan, there are several strategies from other action plans either directly or indirectly addressing the issue of increasing public awareness and understanding of the Sanctuary and its resources:

- CS.2 – Comprehensive Data Management;
- CS.5 – Research Interpretation;
- MH.2 – MHR Volunteer Program;
- MH.3 – Partnering With the Santa Barbara Maritime Museum;
- MH.4 – Implementing a Coordinated MHR Protection Outreach Effort;
- MH.5 – Upgrading the Maritime Heritage Website;
- MH.6 – Supporting Public Education of Chumash Native American Maritime Heritage;
- EE.2 – Expanding Enforcement Efforts; and
- OP.1 – Sanctuary Advisory Council Operations

## Addressing the Issues – Regulations

Not applicable. Education and outreach are important tools used to assist with increasing compliance with Sanctuary regulations. Sanctuary regulations are available at 15 CFR 922.70-922.74.